



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,954	03/12/2004	Ameer G. Mikhail	ARL 00-43	7733

21364 7590 03/29/2006

U S ARMY RESEARCH LABORATORY
ATTN AMSRL CS CC IP
2800 POWDER MILL RD
ADELPHI, MD 207831197

EXAMINER

BERGIN, JAMES S

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,954

Applicant(s)

MIKHAIL, AMEER G.

Examiner

James S. Bergin

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/12/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/27/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear whether the applicant is attempting to claim the combination of an anti-armor projectile, which the specification informs us comprises an MP or CE warhead to which is attached a tail fin boom that contains a KE warhead, or whether the applicant is attempting to claim the subcombination of a tail fin boom that contains a KE warhead, the tail fin boom attachable to an MP or CE warhead? The applicant is reminded that the subcombination of the tail fin boom, with its enclosed KE warhead, has not been disclosed as capable of functioning as intended without being attached to a MP or CE warhead. If the applicant intends to claim the subcombination, then it is suggested that the preamble to the claim be amended to indicate such an intention.

In claim 2, it is unclear in what sense the release means are different from the restraining means previously claimed in claim 1. It is the examiners understanding that the restraining means (of claim 1) and the release means (of claim 2) are one and the same means.

In claim 13, line 2, "said rod-front-end" and "said screwing nut" both lack a proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunn et al. (US 6,843,179 B2).

Regarding claim 1, and in as much as the claim can be understood in light of the above indefiniteness rejection, Hunn et al. disclose an anti-armor projectile (Figs. 1A, 1B, col. 4, line 15 to col. 5, line 49) comprising a tail fin boom 104, 104a, having a first end comprising a fin-end and a second end 110 comprising a main body end, the tail fin boom having an inner hollow area 114 closed at said first end and open at said second end, a KE warhead 102 disposed in the hollow area and a restraining/ release means that holds the warhead to prevent movement thereof in the hollow area prior to impact (see Figs. 3A-3H; col. 4, lines 55-64 and col. 5, lines 10-24). The examiner is defining the fin end/ first end to extend from the bottom of the hollow area 114 to the rear of the tail fin boom 104.

Regarding claim 2, and in as much as the claim can be understood in light of the above indefiniteness rejection, Hunn et al. disclose restraining/ release means that holds the warhead to prevent movement thereof in the hollow area prior to impact (col. 4, lines 55-64 and col. 5, lines 10-24).

Regarding claims 3 and 4, the Hunn et al. warhead 102 can comprise tungsten (col. 6, lines 3-8).

Regarding claim 5, the penetrator 102 is considered to be rod shaped and has a both front 106 and rear ends 112 (see col. 4 lines 33-42). Note that the applicant has not claimed the precise shape of the rod.

Regarding claim 8, a surface of the closed end of the hollow area 114 at the first end inherently maintains structural integrity during forward launch of the projectile Figs. 1A, 1B and 3A-H.

Allowable Subject Matter

5. Claims 6, 7 and 9-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Costello et al. (GB 2,257,238 A) Pollin (US 6,492,632 B1); Pollin (US 5,892,217); Wallow et al. (US 4,706,569); DE 3229220 C1; Kielsmeier et al. (US 6,598,535 B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Bergin whose telephone number is 571-272-6872. The examiner can normally be reached on Monday - Wednesday and Friday, 8.30 - 5.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Bergin', followed by a horizontal line.

James S. Bergin